

and using the claimed invention that bears a reasonable correlation to the entire scope of the claims..." As previously noted in the Request for Reconsideration filed on December 13, 2002, the specification does provide more than one method of producing a purine nucleoside by fermentation using a number of different genes and a number of different ways to increase enzyme activity involved in purine nucleoside biosynthesis. Therefore, a reasonable correlation of the entire scope *is* present.

However, in favor of expedient examination of this application, Applicants have amended Claim 13 to read:

A method for producing a purine nucleoside by fermentation comprising culturing a microorganism in a culture medium to produce and accumulate the purine nucleoside in the medium, and collecting the purine nucleoside, wherein the microorganism belongs to the genus *Escherichia* and has purine nucleoside-producing ability arising from inhibition of a reaction branching from purine nucleoside biosynthesis, and leading to another metabolite, in said microorganism, wherein said reaction is catalyzed by an enzyme selected from the group consisting of succinyl-adenosine monophosphate synthase, purine nucleoside phosphorylase, adenosine deaminase, inosine-guanosine kinase, guanosine monophosphate reductase, 6-phosphogluconate dehydrase, phosphoglucose isomerase, adenine deaminase, and xanthosine phosphorylase.

Based on this amendment, the Examiner's concerns that the skilled artisan would require additional guidance with respect to the specific enzyme responsible for bringing about the result of the claimed method: production of a purine nucleoside by fermentation; have been alleviated. In particular, Applicants note that present Claim 13 provides the specific enzymes, as well as the underlying mechanism giving rise to the desired result.

Therefore, Applicant submit that the present amendment obviates the rejection under 35 U.S.C. §112, first paragraph, and that this ground of rejection should be withdrawn.

The rejection of Claims 13-16 and 22-26 under 35 U.S.C. §112, second paragraph, is obviated by amendment.

In the amendment presented herein, the terms which the Examiner has found to be objectionable have either been removed from the present claims or defined in terms of the specific enzyme and/or gene to which it refers.

Accordingly, Applicants request withdrawal of this ground of rejection.

Applicants submit that the present application is in condition for allowance. Early notification to this effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Norman F. Oblon  
Attorney of Record  
Registration No. 24,618

Vincent K. Shier, Ph.D.  
Registration No. 50,552



22850

(703) 413-3000  
Fax #: (703)413-2220  
NFO/VKS

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IN THE CLAIMS

Cancel Claims 23, 24, and 26.

Please amend the claims as follows:

13. (Twice Amended) A method for producing a purine nucleoside by fermentation comprising culturing a microorganism in a culture medium to produce and accumulate the purine nucleoside in the medium, and collecting the purine nucleoside, wherein the microorganism belongs to the genus *Escherichia* and has [acquired] purine nucleoside-producing ability [because of an activity increase of an enzyme involved in purine nucleoside biosynthesis in cells of the microorganism] arising from inhibition of a reaction branching from purine nucleoside biosynthesis, and leading to another metabolite, in said microorganism, wherein said reaction is catalyzed by an enzyme selected from the group consisting of succinyl-adenosine monophosphate synthase, purine nucleoside phosphorylase, adenosine deaminase, inosine-guanosine kinase, guanosine monophosphate reductase, 6-phosphogluconate dehydrase, phosphoglucose isomerase, adenine deaminase, and xanthosine phosphorylase.

14. (Amended) The method according to claim 13, wherein [the activity of the enzyme involved in purine nucleoside biosynthesis in the cells of the microorganism is increased because of an increase of an] expression [amount] of a gene [for] encoding an enzyme involved in purine nucleoside biosynthesis is increased in said microorganism and said enzyme involved in purine nucleoside biosynthesis is a phosphoribosyl pyrophosphate amidotransferase or a phosphoribosyl pyrophosphate synthase.

15. (Amended) The method according to claim 13, wherein [the activity of the enzyme involved in purine nucleoside biosynthesis in the cells of the microorganism is increased because of deregulation of] control of an enzyme involved in purine nucleoside biosynthesis is deregulated in said microorganism and said enzyme involved in purine nucleoside biosynthesis is a phosphoribosyl pyrophosphate amidotransferase or a phosphoribosyl pyrophosphate synthase.

22. (Amended) The method according to claim 15, wherein the control of the enzyme involved in the purine nucleoside biosynthesis is derepressed by inactivation of a purine repressor encoded by the *purR* gene from *Escherichia coli*.

25. (Amended) The method according to claim 13, wherein [the purine nucleoside-producing ability is enhanced by weakening the] incorporation of a purine nucleoside into [cells of the] said microorganism is inhibited by blockage of a reaction catalyzed by nucleoside permease.--

--27. (New)--